

CALIBRATION RESULTS FOR J-IRS-1 SAR DATA PRODUCED BY THE ALASKA SAR FACILITY

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ABSTRACT

The Alaska SAR Facility has been receiving and processing SAR data from the J-IRS-1 satellite since Spring 1992. Corner reflectors have been set up for J-IRS-1 SAR calibration at a site near Delta Junction, in central Alaska. Image quality and calibration analysis results from the Delta Junction site and others will be presented in this paper.

The impact of the 3-bit Analog-to-Digital Converter and the automatic stepping of the gain as a function of range in the J-IRS-1 radar receiver on calibration performance has been assessed.

Preliminary observations on J-IRS-1 SAR data are that the average Signal-to-Noise ratio is generally fairly low, in the range 5-6dB. Azimuth ambiguity levels are higher than preflight analysis indicated. Over land, the dynamic range in the backscatter at L-band for ~36 degree incidence angle is often fairly high. Thus example J-IRS-1 SAR images of vegetated areas, such as tropical rain forests or boreal forests show greater contrast than their counterparts from the European ERS-1, which images at C-band with ~23 degree incidence angle.

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